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ECONOMICS
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DECEMBER 2001 CONSTRUCTION AT \$863.6 BILLION ANNUAL RATE

Construction put in place during December 2001 was estimated at a seasonally adjusted annual rate of \$863.6 billion, nearly the same (± 5 percent) as the revised November estimate of \$861.8 billion, according to the U.S. Commerce Department's Census Bureau. The December figure represents a 3 (± 5) percent increase over December 2000.

In constant (1996) dollars, the December annual rate was \$717.6 billion, nearly the same (± 5 percent) as the revised estimate of \$717.8 billion for November.

The value of construction put in place for the year 2001 was \$862.5 billion, 6 percent above the \$815.4 billion put in place in 2000. In constant (1996) dollars, the value in 2001 was \$724.8 billion, 3 percent above the 2000 figure of \$706.9 billion. Table 5 shows preliminary estimates for 2001 by type of construction.

PRIVATE CONSTRUCTION

Spending on new residential housing units was at a seasonally adjusted annual rate of \$280.5 billion in December, nearly the same (± 2 percent) as the revised November estimate of \$279.2 billion. Nonresidential building construction was at a rate of \$192.5 billion, nearly the same (± 3 percent) as the revised November estimate of \$193.3 billion.

The value of new residential housing units put in place in 2001 was \$277.7 billion, 5 percent above the \$264.9 billion in 2000. Nonresidential building construction in 2001 was \$208.8 billion, 1 (± 2) percent below the 2000 figure of \$210.1 billion.

PUBLIC CONSTRUCTION

In December, the estimated seasonally adjusted annual rate of public construction put in place was \$206.4 billion, nearly the same (± 5 percent) as the revised November estimate of \$206.8 billion.

Public construction in 2001 was \$195.0 billion, 12 percent above the \$174.9 billion for 2000.

January 2002 data will be released on March 1, 2002 at 10:00 AM EST.

EXPLANATORY NOTES

In interpreting changes in the statistics in this release, note that month-to-month changes in seasonally adjusted statistics often show movements which may be irregular. It may take 2 months to establish an underlying trend for total construction and as long as 8 months for specific categories of construction.

The statistics in this release are estimated from several sources and surveys and are subject to sampling variability as well as nonsampling errors including bias and variance from response, nonreporting, and undercoverage. Estimates of the standard errors are provided in Table 4 for selected types of construction. Whenever a statement such as "2 (± 3) percent above" appears in the text, this indicates the range (-1 to +5 percent) in which the actual percent change is likely to have occurred. All ranges given are 90 percent confidence intervals. If the range contains zero, it is uncertain whether there was an increase or decrease; that is, the change was not statistically significant. For any comparison cited without a confidence interval, the change is statistically significant. Statistics for the current month are preliminary estimates subject to revision in following months as additional data become available. The average absolute percent changes from preliminary estimate to first revision for the major seasonally adjusted components are as follows: total construction, 0.5 percent; private construction, 0.6 percent; private residential construction, 0.5 percent; private nonresidential construction, 1.1 percent; and public construction, 1.4 percent.

More detailed data will appear in Current Construction Reports, C30/01-12, to be issued later this month. A discussion of sources and reliability of the data appears in Current Construction Reports, C30/01-5.

This press release is available on the date of issue through:

1. The internet at http://www.census.gov/const/c30_curr.html
2. The Commerce Department's on-line Economic Bulletin Board (EBB) and STAT-USA/Fax services. For more information, telephone (202) 482-1986.

Table 1. Value of Construction Put in Place in the United States, Seasonally Adjusted Annual Rate

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Dec ^p 2001	Nov ^r 2001	Oct ^r 2001	Sep 2001	Aug 2001	Jul 2001	Jun 2001	Dec 2000	Percent change Dec 2001 from—	
									Nov 2001	Dec 2000
	Current dollars									
Total construction.....	863.6	861.8	858.9	851.9	856.6	863.7	861.6	838.7	(Z)	3
Private construction ¹	657.2	655.0	660.4	660.2	663.1	667.8	665.3	660.8	(Z)	- 1
Residential buildings ²	402.2	399.6	403.4	398.1	399.6	395.7	391.5	379.6	1	6
New housing units.....	280.5	279.2	279.7	279.3	280.2	280.0	278.5	263.5	(Z)	6
1 unit.....	246.8	247.1	248.2	248.2	248.9	248.2	247.5	234.9	(Z)	5
2 units or more.....	33.7	32.1	31.5	31.1	31.3	31.8	31.0	28.6	5	18
Nonresidential buildings.....	192.5	193.3	198.4	202.0	201.9	211.0	210.8	218.0	(Z)	- 12
Industrial.....	23.9	24.4	26.2	31.3	31.9	34.6	33.0	31.4	- 2	- 24
Office.....	46.9	47.9	50.7	50.0	49.7	53.5	55.0	63.1	- 2	- 26
Hotels, motels.....	13.4	14.1	14.2	14.7	14.3	14.9	15.0	15.7	- 5	- 14
Other commercial.....	61.4	61.1	61.3	61.3	61.2	62.4	61.9	62.1	1	- 1
Religious.....	8.4	8.5	8.2	8.6	8.8	8.9	8.7	7.8	- 2	8
Educational.....	14.4	14.0	13.7	13.0	12.4	11.6	11.6	12.1	3	19
Hospital and institutional.....	14.9	14.1	14.9	14.3	14.6	15.4	15.7	16.0	5	- 7
Miscellaneous buildings.....	9.2	9.2	9.1	8.9	9.1	9.6	10.0	9.9	1	- 7
Telecommunications.....	(NA)	20.6	18.9	21.1	22.6	22.0	22.4	23.0	(NA)	(NA)
All other private.....	3.3	3.0	2.9	3.0	2.7	2.6	2.5	2.8	8	16
Public construction.....	206.4	206.8	198.5	191.6	193.5	196.0	196.2	177.9	(Z)	16
Housing and redevelopment.....	7.5	7.5	6.8	6.2	6.0	6.1	6.5	5.6	1	35
Industrial.....	2.4	1.4	1.1	2.0	1.4	1.5	1.4	1.2	69	101
Educational.....	52.2	53.2	53.3	50.6	51.4	50.3	46.8	46.7	- 2	12
Hospital.....	4.5	4.5	4.1	4.1	4.2	3.9	3.9	3.6	- 1	23
Other public buildings.....	33.4	34.7	33.9	33.0	31.7	32.1	32.5	29.0	- 4	15
Highways and streets.....	60.1	59.5	55.5	53.5	55.7	60.5	61.5	50.2	1	20
Military facilities.....	2.2	2.4	2.3	2.4	2.5	2.4	2.5	2.1	- 9	2
Conservation and development ..	7.6	7.3	7.5	7.3	7.3	6.1	6.6	6.3	4	20
Sewer systems.....	10.2	10.7	10.0	9.9	10.0	10.0	10.4	10.0	- 5	2
Water supply facilities.....	8.5	8.1	7.7	8.0	8.0	8.0	8.5	7.0	4	22
Miscellaneous public.....	17.7	17.4	16.3	14.6	15.2	15.1	15.7	16.1	2	10
	1996 dollars									
Total construction.....	717.6	717.8	714.9	713.0	718.5	727.0	724.2	717.2	(Z)	(Z)
Private construction ¹	544.2	543.0	547.6	551.0	554.8	561.3	559.2	564.8	(Z)	- 4
Residential buildings ²	330.2	328.1	332.0	330.4	332.4	331.4	328.2	323.3	1	2
New housing units.....	230.3	229.2	230.2	231.8	233.1	234.5	233.5	224.5	(Z)	3
1 unit.....	202.6	202.9	204.3	205.9	207.1	207.9	207.5	200.1	(Z)	1
2 units or more.....	27.7	26.3	25.9	25.8	26.0	26.6	26.0	24.4	5	13
Nonresidential buildings.....	158.8	159.6	163.5	167.1	167.4	175.4	174.9	183.8	- 1	- 14
Industrial.....	19.7	20.2	21.6	25.9	26.4	28.8	27.4	26.5	- 2	- 26
Office.....	38.7	39.6	41.8	41.3	41.2	44.5	45.6	53.2	- 2	- 27
Hotels, motels.....	11.1	11.6	11.7	12.1	11.9	12.4	12.4	13.2	- 5	- 16
Other commercial.....	50.7	50.4	50.5	50.7	50.7	51.9	51.3	52.4	(Z)	- 3
Religious.....	6.9	7.0	6.8	7.1	7.3	7.4	7.3	6.6	- 2	5
Educational.....	11.9	11.6	11.3	10.8	10.2	9.6	9.6	10.2	2	17
Hospital and institutional.....	12.3	11.7	12.3	11.9	12.1	12.8	13.0	13.5	5	- 9
Miscellaneous buildings.....	7.6	7.6	7.5	7.4	7.5	8.0	8.3	8.3	(Z)	- 9
Telecommunications.....	(NA)	19.2	17.6	19.7	21.1	20.5	20.9	22.1	(NA)	(NA)
All other private.....	2.8	2.6	2.5	2.6	2.4	2.3	2.2	2.5	6	14
Public construction.....	173.4	174.8	167.3	162.0	163.7	165.6	165.0	152.3	- 1	14
Housing and redevelopment.....	6.2	6.1	5.6	5.1	5.0	5.1	5.4	4.8	1	30
Industrial.....	2.0	1.2	0.9	1.7	1.2	1.2	1.2	1.0	68	97
Educational.....	43.0	43.9	44.0	41.9	42.6	41.8	38.8	39.4	- 2	9
Hospital.....	3.7	3.7	3.4	3.4	3.5	3.2	3.3	3.1	- 1	20
Other public buildings.....	27.6	28.7	27.9	27.3	26.3	26.7	27.0	24.5	- 4	13
Highways and streets.....	51.0	51.1	47.4	45.8	47.5	51.3	51.4	42.9	(Z)	19
Military facilities.....	1.8	2.0	2.0	2.0	2.1	2.0	2.1	1.8	- 9	1
Conservation and development ..	6.7	6.5	6.6	6.5	6.5	5.4	5.8	5.7	3	17
Sewer systems.....	9.0	9.5	8.8	8.8	8.9	8.9	9.2	9.0	- 6	(Z)
Water supply facilities.....	7.1	6.9	6.5	6.8	6.8	6.8	7.2	6.1	3	17
Miscellaneous public.....	15.3	15.2	14.2	12.8	13.3	13.1	13.5	14.1	1	8

NA Not available. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential. ²Includes improvements.

Table 2. Value of Construction Put in Place in the United States, Not Seasonally Adjusted in Current Dollars

[Billions of dollars. Detail may not add to total due to rounding. Percent changes based on unrounded figures]

Type of construction	Dec ^P 2001	Nov ^r 2001	Oct ^r 2001	Sep 2001	Aug 2001	Jul 2001	Jun 2001	Dec 2000	Year to date		
									Dec 2001	Dec 2000	Percent change
Total construction	64.2	74.2	79.3	79.9	81.8	79.3	78.2	62.6	862.5	815.4	6
Private construction ¹	49.4	56.8	60.7	60.8	61.7	60.5	59.9	49.8	667.5	640.6	4
Residential buildings ²	28.8	34.9	37.5	37.4	38.0	37.2	36.6	27.1	396.7	374.3	6
New housing units	20.8	24.3	25.3	25.8	26.3	26.0	25.2	19.6	277.7	264.9	5
1 unit	18.2	21.6	22.6	23.1	23.5	23.3	22.5	17.4	246.6	236.8	4
2 units or more	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.2	31.1	28.1	11
Nonresidential buildings	15.4	16.6	17.7	17.9	18.0	18.2	18.2	17.5	208.8	210.1	- 1
Industrial	2.0	2.1	2.4	2.7	2.8	2.9	2.8	2.7	31.2	32.1	- 3
Office	3.7	4.1	4.4	4.3	4.3	4.5	4.7	5.0	54.0	55.7	- 3
Hotels, motels	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	14.7	16.4	- 10
Other commercial	4.8	5.3	5.6	5.7	5.7	5.5	5.4	4.9	63.0	61.5	2
Religious	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.6	8.4	8.1	5
Educational	1.1	1.1	1.2	1.2	1.2	1.1	1.1	0.9	12.6	11.4	11
Hospital and institutional	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.3	15.2	14.6	5
Miscellaneous buildings	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.8	9.7	10.5	- 8
Telecommunications	(NA)	1.8	1.8	1.7	2.1	1.8	1.9	2.0	(NA)	18.0	(NA)
All other private	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	2.8	2.9	- 3
Public construction	14.9	17.4	18.6	19.1	20.1	18.8	18.3	12.8	195.0	174.9	12
Housing and redevelopment	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.5	6.3	5.2	21
Industrial	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	1.6	1.2	34
Educational	3.9	4.3	4.7	4.8	5.4	5.0	4.3	3.4	49.4	43.6	13
Hospital	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	4.1	4.0	1
Other public buildings	2.7	3.0	3.0	3.0	2.8	2.7	2.8	2.3	32.3	28.3	14
Highways and streets	3.6	5.1	6.0	5.9	6.7	6.4	6.2	3.0	57.8	52.1	11
Military facilities	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	2.3	2.3	(Z)
Conservation and development ..	0.6	0.6	0.5	0.9	0.7	0.5	0.6	0.5	7.1	6.0	19
Sewer systems	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.7	10.2	10.3	- 1
Water supply facilities	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	8.0	6.9	15
Miscellaneous public	1.3	1.5	1.5	1.5	1.5	1.4	1.4	1.2	15.9	14.9	7

NA Not available. ^PPreliminary. ^rRevised. Z Less than 0.5 percent.

¹Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential. ²Includes improvements.

Table 3. U.S. Census Bureau Composite Fixed-Weighted (1996 Weights) Price Index and Implicit Price Deflator

[1996 = 100]

Period	Fixed-Weighted Index			Implicit Price Deflator		
	1999	2000	2001	1999	2000	2001
January	108.4	113.9	117.8	108.5	114.0	117.4
February	108.6	114.1	118.3	108.6	114.1	117.7
March	109.0	114.0	118.8	109.0	113.9	118.5
April	109.3	114.5	118.7	109.3	114.4	118.3
May	109.7	114.8	118.9	109.8	114.8	118.6
June	110.4	115.0	119.2	110.3	115.1	119.0
July	110.6	115.6	119.1	110.5	115.7	118.8
August	110.8	115.7	119.4	110.8	115.8	119.2
September	110.9	116.1	119.6	110.8	115.9	119.4
October	111.4	116.4	^r 120.3	111.3	116.3	^r 120.1
November	112.0	116.7	^r 120.3	111.8	116.6	^r 120.1
December	112.3	117.1	^P 120.6	112.1	116.9	^P 120.3
Annual	110.3	115.3	^P 119.3	110.3	115.4	^P 119.0

^PPreliminary. ^rRevised.

Note: The fixed-weighted price index is a weighted average of the individual price index series used to deflate the Value of Construction Put in Place (VIP) series. In calculating the index, the weights (the composition of current dollar VIP in 1996 by category of construction) are held constant. Consequently, the index reflects only changes in prices. The implicit price deflator is a derived ratio of total current to constant dollar VIP (multiplied by 100). It is the average of the individual price indexes used in the deflation of VIP, but the prices are weighted by the composition of VIP each period. As a result, the implicit price deflator reflects not only changes in prices, but also changes in the composition of VIP, and its use as a measure of price change is discouraged.

Table 4. **Relative Standard Errors and Coefficients for Standard Errors of Changes**

Type of construction	Relative standard error (percent)			Coefficient for changes	
	Monthly estimate	Year-to-date estimate	Annual estimate	Month-to-month change (k1)	Year-to-date change (k2)
Total construction	2	1	1	.03	.01
Private construction	3	1	1	.04	.02
Residential buildings	5	2	2	.06	.03
New housing units	2	1	1	.01	.01
1 unit	2	2	2	.01	.01
2 units or more	4	3	3	.03	.03
Nonresidential buildings	2	1	1	.02	.01
Industrial	3	2	2	.04	.03
Office	4	2	2	.05	.03
Hotels, motels	7	5	5	.09	.07
Other commercial	5	2	2	.06	.03
Religious	9	5	5	.12	.07
Educational	7	5	5	.10	.07
Hospital and institutional	6	5	5	.07	.07
Miscellaneous buildings	7	4	4	.09	.06
Public construction	2	1	1	.03	.01
Housing and redevelopment	8	4	4	.11	.06
Industrial	(NA)	(NA)	(NA)	(NA)	(NA)
Educational	3	2	2	.04	.03
Hospital	6	4	4	.08	.06
Other public buildings	3	2	2	.04	.03
Highways and streets	4	2	2	.05	.03
Military facilities	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development	4	2	2	.06	.03
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	3	3	.11	.04
Miscellaneous public	8	4	4	.11	.06

NA Not available.

Note: All statistics are based upon 2000 data. The coefficient (k1) for the month-to-month change is applicable to change from the previous month and change from the same month a year ago.

The standard errors (SE) for month-to-month and year-to-date changes may be approximated by the following formula with the appropriate coefficient shown in Table 4:

$$SE(\text{change}) = (k1 \text{ or } k2) (100 + \% \text{ change shown in table}).$$

For example, Table 1 shows that private 'office' construction decreased 2 percent from last month. The standard error of the 2 percent decrease is about equal to 5 percentage points:

$$SE(2\% \text{ decrease}) = (.05)(100-2) = (.05)(98) = 5\%$$

Once the standard error is available, one can construct a 90 percent confidence interval of the change by multiplying the standard error by 1.6. In the above example, an approximate 90 percent confidence interval of the 2 percent decrease for private 'office' construction would be between:

$$6 \text{ and } -10 \text{ percent } (-2\% \text{ plus or minus } 8\% (5\% \times 1.6)).$$

Table 5. Annual Value of Construction Put in Place in the United States in Current Dollars and 1996 Dollars

[Detail may not add to total due to rounding]

Type of construction	Value (millions of dollars)				Percent change from 2000 to 2001	
	Current dollars		1996 dollars		Current dollars	1996 dollars
	2001 ^P	2000	2001 ^P	2000		
Total construction	862,494	815,414	724,782	706,899	6	3
Private construction ¹	667,501	640,554	559,805	555,089	4	1
Residential buildings ²	396,748	374,274	330,661	323,708	6	2
New housing units.....	277,706	264,864	231,465	229,103	5	1
1 unit.....	246,607	236,788	205,543	204,812	4	(Z)
2 units or more.....	31,099	28,076	25,922	24,292	11	7
Nonresidential buildings.....	208,793	210,140	173,580	179,654	- 1	- 3
Industrial.....	31,154	32,073	25,908	27,419	- 3	- 6
Office.....	53,950	55,686	44,867	47,594	- 3	- 6
Hotels, motels.....	14,739	16,396	12,255	14,027	- 10	- 13
Other commercial.....	62,977	61,453	52,341	52,539	2	(Z)
Religious.....	8,441	8,068	7,014	6,898	5	2
Educational.....	12,638	11,356	10,501	9,707	11	8
Hospital and institutional.....	15,233	14,575	12,665	12,459	5	2
Miscellaneous buildings.....	9,660	10,533	8,031	9,010	- 8	- 11
Telecommunications.....	(NA)	17,994	(NA)	17,497	(NA)	(NA)
All other private.....	2,805	2,899	2,440	2,570	- 3	- 5
Public construction	194,993	174,860	164,978	151,810	12	9
Housing and redevelopment.....	6,341	5,228	5,282	4,521	21	17
Industrial.....	1,556	1,159	1,293	991	34	30
Educational.....	49,421	43,560	41,055	37,237	13	10
Hospital.....	4,057	4,007	3,371	3,427	1	- 2
Other public buildings.....	32,289	28,321	26,829	24,214	14	11
Highways and streets.....	57,763	52,088	49,053	45,230	11	8
Military facilities.....	2,345	2,337	1,970	2,016	(Z)	- 2
Conservation and development ..	7,142	6,014	6,367	5,449	19	17
Sewer systems.....	10,197	10,287	9,090	9,324	- 1	- 3
Water supply facilities.....	7,971	6,928	6,827	6,160	15	11
Miscellaneous public.....	15,909	14,930	13,840	13,241	7	5

NA Not available. ^PPreliminary. ^TRevised. Z Less than 0.5 percent.

¹Includes the following categories of private construction not shown separately: residential improvements, railroads, electric light and power, gas, petroleum pipelines, and farm nonresidential.

²Includes improvements.